ABSTRACT OF THE DISCLOSURE

A modeling tool that is executable in a system includes a modeling application that is capable of deriving a predicted quality of communications in a represented communications system. A user may create a representation of a target

5    communication system by using icons representing different network components to build the representation in a user interface. Each of the network components is associated with one or more performance parameters, such as packet delay, packet loss, and jitter for packet-based network components. An overall performance parameter, such as an overall packet delay, overall packet loss, and overall jitter may

10   be derived based on the performance parameters for each of the network components. From the overall performance parameters, the expected or predicted performance of the target communications system may be determined by using an E-model in one arrangement.